

PRODUCT OVERVIEW

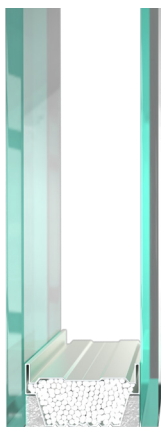
# ENTHERMAL PLUS

ENTHERMAL. 10mm. R18.



TRANSPARENT INSULATION

**Enthermal Plus** is a breakthrough in high-performance residential and commercial glazing. This 1-inch insulating glass unit (IGU) combines LuxWall's Enthermal 8-mm and 10-mm slim profile vacuum technology with a traditional insulating glass unit to deliver an impressive 0.043 u-factor — more than 5x the performance of standard double-pane units and 3x the performance of triple-pane units. Best of all, Enthermal Plus fits seamlessly into your existing 1-inch (25-mm) IGU framing system, so no engineering re-design or factory retooling is required. Give your customers next-level energy efficiency, noise reduction, condensation resistance, and year-round comfort—without changing your product design.



**DOUBLE PANE**  
25-mm



**ENTHERMAL PLUS**  
25-mm

0.043  
U-Factor

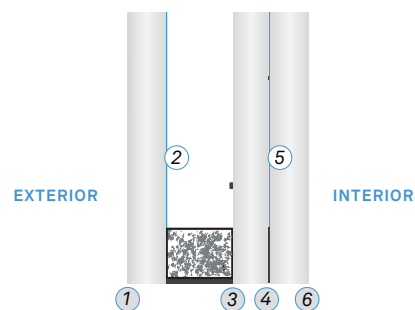
49%  
Visible  
Transmittance

0.27  
Solar Heat  
Gain Coefficient

77  
Condensation  
Resistance Factor

**COATING POSITION**

Coatings applied to **Surface 2** and **Surface 5** of the Enthermal Plus enable targeted thermal efficiency. Coatings can be selected to optimize for visible light transmission, passive solar design, insulating performance, and elevation specific design.



**SINGLE SILVER LOW-E OUTBOARD + IGU CAVITY WITH ARGON + ENTHERMAL INBOARD**

	VISIBLE LIGHT		FADING		SHGC	U-FACTOR		LSG
	Visible Light Transmittance	Exterior Reflectance	T-UV	T-UV DW ISO		Argon Fill		
						IP / SI		
② LoE <sup>-180</sup> / Clear / ⑤ LoE <sup>-180</sup>	68%	20%	11%	49%	0.52	0.067 / 0.380	1.31	
② LoE <sup>-180</sup> / Clear / ⑤ LoE <sup>-270</sup>	60%	19%	6%	41%	0.40	0.052 / 0.295	1.51	
② LoE <sup>-180</sup> / Clear / ⑤ LoE <sup>-366</sup>	56%	18%	2%	35%	0.35	0.044 / 0.250	1.61	

**DOUBLE SILVER LOW-E OUTBOARD + IGU CAVITY WITH ARGON + ENTHERMAL INBOARD**

	VISIBLE LIGHT		FADING		SHGC	U-FACTOR		LSG
	Visible Light Transmittance	Exterior Reflectance	T-UV	T-UV DW ISO		Argon Fill		
						IP / SI		
② LoE <sup>-270</sup> / Clear / ⑤ LoE <sup>-180</sup>	53%	16%	6%	41%	0.31	0.066 / 0.375	1.68	
② LoE <sup>-270</sup> / Clear / ⑤ LoE <sup>-270</sup>	53%	15%	3%	35%	0.29	0.051 / 0.290	1.80	
② LoE <sup>-270</sup> / Clear / ⑤ LoE <sup>-366</sup>	49%	14%	1%	30%	0.27	0.043 / 0.244	1.80	
② Solarban 60 <sup>®</sup> / Clear / ⑤ Solarban 60 <sup>®</sup>	57%	13%	6%	39%	0.32	0.051 / 0.290	1.78	
② Solarban 60 <sup>®</sup> / Clear / ⑤ Solarban 70 <sup>®</sup>	53%	14%	2%	33%	0.27	0.042 / 0.238	1.92	

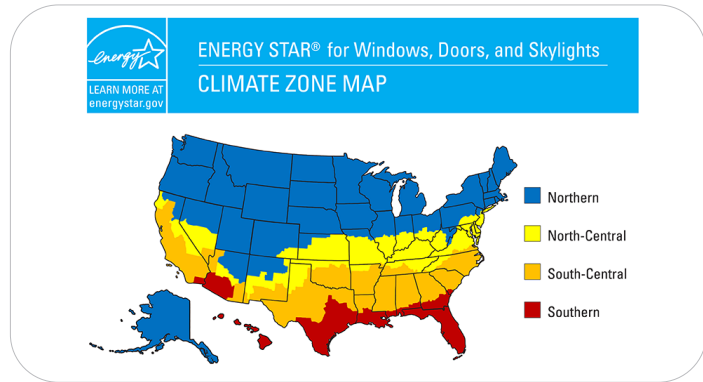
**TRIPLE SILVER LOW-E OUTBOARD + IGU CAVITY WITH ARGON + ENTHERMAL INBOARD**

	VISIBLE LIGHT		FADING		SHGC	U-FACTOR		LSG
	Visible Light Transmittance	Exterior Reflectance	T-UV	T-UV DW ISO		Argon Fill		
						IP / SI		
② LoE <sup>-366</sup> / Clear / ⑤ LoE <sup>-180</sup>	56%	14%	2%	35%	0.24	0.066 / 0.375	2.37	
② LoE <sup>-366</sup> / Clear / ⑤ LoE <sup>-270</sup>	49%	14%	1%	30%	0.23	0.051 / 0.290	2.11	
② LoE <sup>-366</sup> / Clear / ⑤ LoE <sup>-366</sup>	46%	13%	0%	27%	0.23	0.043 / 0.244	2.01	
② Solarban 70 <sup>®</sup> / Clear / ⑤ Solarban 70 <sup>®</sup>	48%	16%	1%	29%	0.22	0.042 / 0.238	2.18	

**ENERGY STAR® CERTIFICATION FOR RESIDENTIAL WINDOWS**

ENERGY STAR® is a program run by the U.S. Environmental Protection Agency (EPA) that promotes energy efficiency in consumer products, including windows. ENERGY STAR 7.0 is the latest version of the ENERGY STAR program's requirements for windows.

LuxWall's Enthermal transparent insulation combined with defying insulating glass technology delivers best in class performance to meet the ENERGY STAR® criteria for all four climate zones.



ENERGY STAR® REQUIREMENTS	C180/ CLR/ C180	C180/ CLR/ C270	C180/ CLR/ C366	C270/ CLR/ C180	C270/ CLR/ C270	C270/ CLR/ C366	C366/ CLR/ C180	C366/ CLR/ C270	C366/ CLR/ C366	SB60/ CLR/ SB60	SB60/ CLR/ SB70	SB70/ CLR/ SB70
U-value ≤ 0.22, SHGC ≥ 0.17	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
U-value ≤ 0.23, SHGC ≥ 0.35	✓											
U-value ≤ 0.24, SHGC ≥ 0.35	✓											
U-value ≤ 0.25, SHGC ≥ 0.40	✓											
U-value ≤ 0.26, SHGC ≥ 0.40	✓											
U-value ≤ 0.25, SHGC ≤ 0.40		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
U-value ≤ 0.28, SHGC ≤ 0.23						✓	✓	✓	✓			✓
U-value ≤ 0.32, SHGC ≤ 0.23						✓	✓	✓	✓			✓

\*Assumptions: Coating surfaces are located on surfaces 2 and 5. Outboard 1/2 inch argon cavity 90/10. All lites are 5-mm thickness. Window LBNL calculation method.

**SPECIFICATIONS**

**ENTHERMAL DIMENSIONS**

Maximum | 60" x 96"  
Minimum | 12" x 18"

**GLASS STRENGTH**

Tempered Enthermal  
Tempered Enthermal with Heat Soak  
Annealed, HS or Tempered Outboard

**ENTHERMAL THICKNESS PROFILE**

8-mm, 9-mm, 10-mm, 11-mm, and 12-mm

**COATED GLASS OPTIONS**

Cardinal LoE<sup>-180</sup>, Cardinal LoE<sup>-270</sup>, and Cardinal LoE<sup>-366</sup>  
Solarban 60® and Solarban 70®

**OUTBOARD DESIGN OPTIONS**

Tinted Outboard Substrates  
Privacy Glass  
Storm Laminated Glass  
Security Laminated Glass  
Bird Friendly Glass  
Grids Between Glass  
Additional Low-E Coatings

**WARRANTY**

LuxWall Enthermal comes with a 20-year, 150% credit warranty when combined with insulating glass products. LuxWall has subjected Enthermal to accelerated durability testing well beyond the industry standard requirements of ASTM 2188/2189/2190 to ensure product longevity. LuxWall has successfully passed the following accelerated performance levels: -60° C to +130° C thermal cycling, +85° C with 85% relative humidity, +/- 90° C asymmetric thermal shock, DP Rating of 80, 25K door slam cycles, accelerated UV (up to 32X standard ultraviolet exposure), combinatorial humidity freeze, and salt spray.

**ADDITIONAL PERFORMANCE AND AESTHETIC OPTIONS ARE AVAILABLE UPON REQUEST**

LuxWall performance data is calculated in accordance with LBNL Windows 7 program. • Information within this document is subject to change without notice or obligation. • The information contained herein is offered in good faith and believed to be accurate. The stated information should not be used in substitution for customer's tests to ensure our products are safe, effective, and fully satisfactory for the intended end use.

